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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/763,594	01/22/2004	Harry H. Hong	P-US058-A-MF	7731

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EXAMINER	
WOLLSCHLAGER, JEFFREY MICHAEL	
ART UNIT	PAPER NUMBER
1732	

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/763,594	HONG, HARRY H.	
	Examiner	Art Unit	
	Jeff Wollschlager	1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 August 2006*.

2a)☒ This action is **FINAL**.* 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/18/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

Applicant's amendment to the claims filed August 9, 2006 has been entered. Claims 11-20 have been cancelled. Claims 1 and 6 are currently amended. The 35 U.S.C. 112, second paragraph rejection has been withdrawn.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on August 18, 206 was filed after the mailing date of the office action on April 5, 2006. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen (U.S. Patent 6,027,630; issued February 22, 2000) in view of Lien et al. (U.S. Patent 4,528,081; issued July 9, 1985).

Regarding claim 1, Cohen teaches a method of forming a conformable mask comprising a) applying a liquid composition, to a desired thickness, to a support

structure, b) curing the composition to form a solidified and flexible member, and c) laser ablating with UV radiation a selected portion of the flexible member to form a patterned mask comprising at least one opening extending through the flexible member (col. 12, lines 12-22; Figure 8). Cohen does not teach that the liquid composition of the conformable mask is the same as the composition of claim 1.

However, Lien et al. teach a liquid composition for forming elastomers suitable for potting and encapsulating electrical devices that have excellent thermal stability, low temperature flexibility, and high dielectric strength (col. 1, lines 10-13 and lines 50-55). The composition of the liquid comprises i.) a first component comprising molecules having at least one aromatic ring attached to a silicone backbone that possesses a plurality of SiH functional groups (col. 2, lines 6-26 and col. 3, lines 55-60), where R1 and R2 are hydrogen and phenyl ; ii) a second component comprising molecules having a ring structured polyimide with a plurality of double bond functional groups, namely triallyl-S-triazine-2,4,6(1H,3H,5H)-trione, (col. 3, lines 34-38); and iii) a catalyst (col. 2, lines 49-59).

Therefore it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the claimed invention to take the method of Cohen and modify the liquid composition to that taught by Lien et al. because the method of Cohen describes the requirements for a material to be suitable for a conformable contact mask. These requirements include properties such as the material being elastomeric and having a high electrical resisitivity (col. 5, line 25 – col. 6, line 17). The material taught by Lien et al. meets these criteria. Further, Lien et al. declare the suitability of their material for

electrical applications, specifically encapsulation (col. 1, lines 10-13). The conformable contact mask, analogously encapsulates the support structure. As a result, the invention as a whole is rendered obvious over the combined teachings of the prior art.

As to claim 2, Lien et al. teach that a third component having an aromatic ring backbone with a plurality of double bond functional groups may be utilized in the liquid composition (col. 3, lines 5-34). Diethoxyacetophenone is exemplified (col. 3, line 10).

As to claim 3, Lien et al. further teach that a fourth component comprising molecules having an aromatic ring backbone with a plurality of SiH functional groups may be employed (col. 3, lines 10-12 (mixtures); and col. 3, lines 25-34).

As to claim 4, platinum catalysts are well known in the art. Further, Lien et al. disclose a platinum catalyst (col. 1, lines 26-33).

As to claim 5, Lien et al. teach elevating the temperature of the liquid composition during curing (col. 4, lines 27-31).

Regarding claim 6, Cohen teaches a method of forming a conformable mask comprising a) applying a liquid composition, to a desired thickness, to a support structure, b) curing the composition to form a solidified and flexible member, and c) laser ablating a selected portion of the flexible member to form a patterned mask comprising at least one opening extending through the flexible member (col. 12, lines 12-22; Figure 8). Cohen does not teach that the liquid composition of the conformable mask is the same as the composition of claim 6.

However, Lien et al. teach a liquid composition for forming elastomers suitable for potting and encapsulating electrical devices that have excellent thermal stability, low

temperature flexibility, and high dielectric strength (col. 1, lines 10-13 and lines 50-55). The composition of the liquid comprises i.) a first component comprising molecules having a silicone backbone and a plurality of SiH functional groups and having a plurality of organic compatibility enhancing groups having structure R, (col. 3, line 53-60 where R1 and R2 are hydrogen and phenyl) ii) a second component comprising flexible cyclic molecules having a plurality of double bond functional groups, (col. 3, lines 34-40) and iii) a catalyst (col. 2, lines 49-59).

Therefore it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the claimed invention to take the method of Cohen and modify the liquid composition to that taught by Lien et al. because the method of Cohen describes the requirements for a material to be suitable for a conformable contact mask (col. 5, line 25 – col. 6, line 17) including requirements such as being elastomeric and having high electrical resisitivity. The material taught by Lien et al. meets these criteria. Further, Lien et al. declare the suitability of their material for electrical applications, specifically encapsulation (col. 1, lines 10-13). The conformable contact mask, analogously encapsulates the support structure.

As to claim 7, Lien et al. teach a third component comprising molecules having a plurality of SiH functional groups and having a structure compatible with R (col. 3, lines 25-34).

As to claim 8, Lien et al. teach a fourth component comprising radiation absorbing molecules having a plurality of double bond functional groups and having a

structure compatible with R (col. 3, lines 5-12). Diethoxyacetophenone is exemplified (col. 3, line 10).

As to claim 9, platinum catalysts are well known in the art. Further, Lien et al. disclose a platinum catalyst (col. 1, lines 26-33).

As to claim 10, Lien et al. teach that the molecules having a plurality of double bond functional groups and having a structure compatible with R comprises a plurality of structures compatible with R (col. 2, lines 6-26). R1 – R5, in the composition taught by Lien et al., may be a plurality of different radicals.

Claims 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cohen (U.S. Patent 6,027,630; issued February 22, 2000) in view of Lee et al. (U.S. Patent 6,1,24,407; issued September 26, 2000).

Regarding claim 6, Cohen teaches a method of forming a conformable mask comprising a) applying a liquid composition, to a desired thickness, to a support structure, b) curing the composition to form a solidified and flexible member, and c) laser ablating with UV radiation a selected portion of the flexible member to form a patterned mask comprising at least one opening extending through the flexible member (col. 12, lines 12-22; Figure 8). Cohen does not teach that the liquid composition of the conformable mask is the same as the composition of claim 6.

However, Lee et al. teach a liquid composition for forming elastomers with a low dielectric constant (col. 4, lines 22-46). The composition of the liquid comprises i.) a first component comprising molecules having a silicone backbone and a plurality of SiH

functional groups and having a plurality of organic compatibility enhancing groups having structure R, (col. 8, lines 7-15, a dimethylmethylhydrogensiloxane component of component C) ii) a second component comprising flexible cyclic molecules having a plurality of double bond functional groups (col. 5, lines 34-42), and iii) a catalyst (col. 11, lines 18-32).

Therefore it would have been *prima facie* obvious to one of ordinary skill in the art at the time of the claimed invention to take the method of Cohen and modify the liquid composition to that taught by Lee et al. because the method of Cohen describes the requirements for a material to be suitable for a conformable contact mask (col. 5, line 25 – col. 6, line 17) including requirements such as being elastomeric and having high electrical resisitivity. The material taught by Lee et al. clearly meets these criteria. Further, Lee et al. provide additional reasons to choose this composition for masking applications, including its workability, its lack of toxicity, its lack of a solvent, and its low dielectric constant (col. 3, lines 65-col. 4, line 45). Clearly, one of ordinary skill would be motivated to use this elastomer in the method taught by Cohen to form a flexible conformable contact mask.

As to claim 7, Lee et al. teach a third component comprising molecules having a plurality of SiH functional groups and having a structure compatible with R (col. 8, lines 7-15, a polymethylhydrogensiloxane component of component C).

As to claim 8, Lee et al. teach a fourth component comprising radiation absorbing molecules having a plurality of double bond functional groups and having a structure compatible with R (col. 5, lines 48-60).

As to claim 9, the catalyst taught by Lee et al. is a platinum catalyst (col. 11, lines 18-32).

As to claim 10, Lee et al. teach that the molecules having a plurality of double bond functional groups and having a structure compatible with R comprises a plurality of structures compatible with R (col. 5, lines 18-20 and col. 6, lines 23-25).

Response to Arguments

Applicant's arguments filed August 9, 2006 have been fully considered but they are not persuasive.

Applicant's arguments appear to be on the following grounds:

1. Neither Lien et al. nor Lee et al. ablate their material or teach that the material is laser ablatable by UV laser radiation and that as such, one of ordinary skill would not combine either Lien et al. or Lee et al. with the process of Cohen.

Applicant's arguments are not persuasive for the following reason:

1. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). The examiner notes that Cohen teaches laser ablation with UV radiation.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by

combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, Cohen teaches a method of forming a conformable mask which comprises laser ablating a selected portion of material using UV radiation. Cohen also provides criteria for the material. Lien et al. and Lee et al. each individually disclose materials meeting the limitations of the claimed material and provide descriptions of the properties and advantages of these materials. For example, Lien et al. describes how their material cures quickly and cures in shadow areas (col. 1, lines 51-60). Further, for the reasons and as described in the rejection above, one having ordinary skill in the art at the time of the claimed invention would have been motivated to combine the references.

Conclusion

All claims are rejected.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeff Wollschlager whose telephone number is 571-272-8937. The examiner can normally be reached on Monday - Thursday 7:00 - 4:45, alternating Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JW

Jeff Wollschlager
Examiner
Art Unit 1732

October 14, 2006

CHRISTINA JOHNSON
PRIMARY EXAMINER
10/10/06